BRAIN RESEARCH

VOL. 515 NOS. 1/2 CONTENTS 7 MAY 1990

Research Reports

Dopaminergic involvement in the cocaine-induced up-regulation of benzodiazepine receptors in the rat caudate nucleus
N. Goeders, V. Bell, A. Guidroz and M. McNulty (U.S.A.) 1

Destruction of the hamster serotonergic system by 5,7-DHT: effects on circadian rhythm phase, entrainment and response to triazolam
L. Smale, K.M. Michels, R.Y. Moore and L.P. Morin (U.S.A.) 9

Medial preoptic area kindling induces sexual behavior in sexually inactive male rats
R. Paredes, A.E. Haller, M. Consuelo Manero, R. Alvarado and A. Ågamo (Mexico) 20

In vitro ischemia and protein synthesis in the rat hippocampal slice: the role of calcium and NMDA receptor activation
K.M. Raley-Susman and P. Lipton (U.S.A.) 27

Decreased survival of hippocampal neurons in medium conditioned by fibroblasts from aged and Alzheimer donors
C. Peterson and C.W. Cotman (U.S.A.) 39

Effects of prenatal protein malnutrition on perforant path kindling in the rat
J.D. Bronzino, R.J. Austin-LaFrance and P.J. Morgane (U.S.A.) 45

Temperature-independent binding of [^{3}H](±)-3-(2-carboxypiperazin-4-yl)propyl-1-phosphonic acid in brain synaptic membranes treated by Triton X-100
K. Ogita and Y. Yoneda (Japan) 51

Evaluation of a 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-treated C57 black mouse model for parkinsonism
N. Arai, K. Misugi, Y. Goshima and Y. Misu (Japan) 57

Developmental sex differences and effect of ovariectomy on the number of cortical pyramidal dendritic spines
J.A. Muñoz-Cueto, L.M. García-Segura and A. Ruiz-Marcos (Spain) 64

Presence of sex difference of cytochrome P-450 in the rat preoptic area and hypothalamus with reference to coexistence with oxytocin
K. Hagihara, S. Shiosaka, Y. Lee, J. Kato, O. Hatano, A. Takakusu, Y. Emi, T. Omura and M. Tohyama (Japan) 69

Cysteinyl-leukotriene production during limbic seizures triggered by kainic acid
T. Simmet and B. Tippler (F.R.G.) 79

Substantia nigra-mediated anticonvulsant action: a possible role of a dopaminergic component
V. La Grutta and M. Sabatino (Italy) 87

Changes in pontine unit activity with REM sleep deprivation
B.N. Mallick, J.M. Siegel and H. Fahringer (U.S.A.) 94

Specific alterations in cardiovascular function and in glucose utilisation within lower brainstem nuclei following intracisternal neuropeptide Y in the conscious rat
I.M. Macrae, D. Dewar, J.L. Reid and J. McCulloch (U.K.) 99

Effects of cerebellectomy at day 15 on the ontogenesis of the equilibrium behavior in the rat
C. Zion, N. Auvray, J. Caston, A. Reber and T. Stelz (France) 104

Corpus callosum: effects of neonatal hormones on sexual dimorphism in the rat
R.H. Fitch, A.S. Berrebi, P.E. Cowell, L.M. Schrott and V.H. Denenberg (U.S.A.) 111

Compartmental ordering of cholinergic innervation in the mediodorsal nucleus of the thalamus in human brain
J.-P.A. Brandel, E.C. Hirsch, L.B. Hersh and F. Javoy-Agid (France, U.S.A.) 117

Non-reciprocal facilitation of trigeminal motoneurons innervating jaw-closing and jaw-opening muscles induced by iontophoretic application of serotonin in the guinea pig
I. Kurasawa, K. Toda and Y. Nakamura (Japan) 126

Electrophysiological analysis of synaptic transmission between intraocular hippocampus/locus coeruleus co-transplants
M. Mynlieff and T.V. Dunwiddie (U.S.A.) 135

The antinociceptive effects of intrathecally administered SCH32615, an enkephalinase inhibitor in the rat
S. Oshita, T.L. Yaksh and R. Chipkin (U.S.A.) 143

Retinal X-afferents bifurcate to lateral geniculate X-cells and to the pretectum or superior colliculus in cats
J. Hada and Y. Hayashi (Japan) 149

The response of suprachiasmatic neurons of the rat hypothalamus to photic and serotonergic stimulation
J.D. Miller and C.A. Fuller (U.S.A.) 155

Cyclic changes in dopamine and DOPAC content, and tyrosine hydroxylase activity in the retina of a cichlid fish
I. Wulle, M. Kirsch and H.-J. Wagner (F.R.G.) 163

Effects of adenosine deaminase inhibition on active uptake and metabolism of adenosine in astrocytes in primary cultures
H. Matz and L. Hertz (Canada) 168

Striatal dopamine terminals release serotonin after 5-HTP pretreatment: in vivo voltammetric data
J.A. Stamford, Z.L. Kruk and J. Millar (U.K.) 173

Responses of human muscle spindle afferents during isotonic position holding and active movements
M.T. Jahnke and A. Struppler (F.R.G.) 181

μ-Opiate receptor binding in the medial preoptic area is cyclical and sexually dimorphic
R.P. Hammer Jr. (U.S.A.) 187

(contents continued on p. 360)

Cited in Biological Abstracts (BIOSIS) — Chem. Abstracts — Index Medicus — Current Contents (Life Sci.) — Excerpta Medica (EMBASE) — Psychological Abstracts (PsycINFO) — PASCAL M

(contents continued)

Amelioration of spatial memory impairment by intrahippocampal grafts of mixed septal and raphe tissue in rats with combined cholinergic and serotonergic denervation of the forebrain
O.G. Nilsson, P. Brundin and A. Björklund (Sweden) 193
The role of spinal and brainstem adenosine receptors in the modulation of the volume-evoked micturition reflex in the unanesthetized rat
M. Sosnowski and T.L. Yaksh (U.S.A.) 207
Is glutamate a co-transmitter in cortical cholinergic terminals? Effects of nucleus basalis lesion and of presynaptic muscarinic agents
J.C. Szerb and A. Fine (Canada) 214
Role of anterior pretectal nucleus in somatosensory cortical descending modulation of jaw-opening reflex in rats
C.Y. Chiang, J.O. Dostrovsky and B.J. Sessle (Canada) 219
Alz-50 immunoreactivity in the thalamic reticular nucleus in Alzheimer's disease
W.G. Tourtellotte, G.W. Van Hoesen, B.T. Hyman, R.K. Tikoo and A.R. Damasio (U.S.A.) 227
Pial venous pressure and acute hypertensive disruption of the blood–brain barrier in spontaneous and renal hypertension
A.H. Werber and M.C. Fitch-Burke (U.S.A.) 235
Coordination of reinnervated muscle and reorganization of spinal cord motoneurons after nerve transection in mice
M. Wasserschaff (F.R.G.) 241
Peptidergic innervation of the locus coeruleus cells in the human brain
C. Pammer, T. Görcs and M. Palkovits (Hungary) 247
Effect of conditioning lesions on regeneration of goldfish optic axons: time course of the cell body reaction to axotomy
J.B. Reich, D.W. Burmeister, J.T. Schmidt and B. Grafstein (U.S.A.) 256
Ca^{2+}-dependent adaptive properties in the solitary olfactory receptor cell of the newt
T. Kurahashi and T. Shibuya (Japan) 261
α-Methyl-*p*-tyrosine pretreatment partially prevents methamphetamine-induced endogenous neurotoxin formation
K.J. Axt, D.L. Commins, G. Vosmer and L.S. Seiden (U.S.A.) 269
A retrograde transport method for mapping zinc-containing fiber systems in the brain
G.A. Howell and C.J. Frederickson (U.S.A.) 277
Aging in male rats modifies castration and testosterone-induced neuropeptide Y response in various microdissected brain nuclei
A. Sahu, S.P. Kalra, W.R. Crowley and P.S. Kalra (U.S.A.) 287

Short Communications

Dopamine receptors mediate drug-induced but not Pavlovian conditioned contralateral rotation in the unilateral 6-OHDA animal model
R.J. Carey (U.S.A.) 292
Studies on the site and mechanism of the sympathoexcitatory action of 5-HT_2 agonists
M.E. Clement and R.B. McCall (U.S.A.) 299
The identification of a brainstem site controlling spinal sexual reflexes in male rats
L. Marson and K.E. McKenna (U.S.A.) 303
Controlled release of nerve growth factor from a polymeric implant
E.M. Powell, M.R. Sobarzo and W.M. Saltzman (U.S.A.) 309
Coexistence of calcitonin gene-related peptide and enkephalin in single neurons of the lateral superior olivary nucleus of the guinea pig that project to the cochlea as lateral olivocochlear system
Y. Tohyama, E. Senba, T. Yamashita, M. Kitajiri, H. Kuriyama, T. Kumazawa, K. Ohata and M. Tohyama (Japan) 312
Corticotropin-releasing factor (CRF) increases paradoxical sleep (PS) rebound in PS-deprived rats
F. Marrosu, G.L. Gessa, M. Giagheddu and W. Fratta (Italy) 315
An NMDA-mediated component of excitatory synaptic input to dentate cells in 'epileptic' human hippocampus studied in vitro
L. Urban, P.G. Aitken, A. Friedman and G.G. Somjen (U.S.A.) 319
Intracerebroventricular naloxone produces a dose-dependent, monotonic increase in nociceptive threshold in the rat
C. Miaskowski, Y.O. Taiwo and J.D. Levine (U.S.A.) 323
Laminar analysis of bicuculline-induced epileptiform activity in area 17 of the awake macaque
C.E. Schroeder, C.E. Tenke, S.J. Givre, J.C. Arezzo and H.G. Vaughan Jr. (U.S.A.) 326
Neuronal intermediate filaments in rat dorsal root ganglia: differential distribution of peripherin and neurofilament protein immunoreactivity and effect of capsaicin
G.L. Ferri, A. Sabani, L. Abelli, J.M. Polak, D. Dahl and M.-M. Portier (Italy, U.K., U.S.A., France) 331
Amyloid β-protein precursor is associated with extracellular matrix
F.G. Klier, G. Cole, W. Stallcup and D. Schubert (U.S.A.) 336
Ipsilaterally evoked responses of the zebra finch visual wulst are reduced during ontogeny
M. Bredenkötter and H.-J. Bischof (F.R.G.) 343
Rat astrocytes express interferon-γ immunoreactivity in normal optic nerve and after nerve transection
B. Schmidt, G. Stoll, K.V. Toyka and H.-L. Hartung (F.R.G.) 347
An electrophysiological study of trigeminal commissural interneurons in the anaesthetized rabbit
R. Donga, J.P. Lund and D. Veilleux (Canada) 351
Vasopressin produces long-lasting increase in transmitter release
M. Abdul-Ghani, H. Meiri and R. Rahamimoff (Israel) 355

Author Index 358